



A.D. 1863, *28th August.* N° 2126.

S P E C I F I C A T I O N

OF

EDOUARD AMOUROUS.

SEPARATING FECAL MATTERS.

LONDON:

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1864.

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### Separating Fecal Matters.

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**LETTERS PATENT** to Edouard Amourous, of No. 4, South Street, Finsbury, London, for the Invention of “**IMPROVEMENTS IN APPARATUS FOR SEPARATING SOLID FROM FLUID FECAL MATTERS.**”

Sealed the 19th January 1864, and dated the 28th August 1863.

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**PROVISIONAL SPECIFICATION** left by the said Edouard Amourous at the Office of the Commissioners of Patents, with his Petition, on the 28th August 1863.

I, EDOUARD AMOUROUS, of No. 4, South Street, Finsbury, London, Gentleman,  
5 do hereby declare the nature of my said Invention of “**IMPROVEMENTS IN APPARATUS FOR SEPARATING SOLID FROM FLUID FECAL MATTERS,**” to be as follows, that is to say:—

My Invention consists in the construction of an apparatus applicable to moveable and fixed cesspools for separating the solid from the liquid portions  
10 of fecal matters before they enter into the said cesspools or reservoirs.

The accompanying Drawing will serve to describe my Invention. *a, a,* are reservoirs or cesspools; *b*, cover of the cesspool, on which are fixed the casing and conical shaped pans *d, d*; *e*, valve; *f*, pipe for the discharge of the liquid matters; *g*, elbow junction of the soil pipe, the bottom part *e* of which is  
15 enlarged to form a casing round the conical shaped vessels; *h*, casing which forms a reservoir for the running off of the liquids; *i*, soil pipe; *j*, drain pipe. The operation which takes place in these apparatuses is as follows:—The fecal matters entering by the soil pipe from the waterclosets separate, the solids falling perpendicularly, and the liquids in the direction of the sides of



*Amourous' Improvements in Separating Fecal Matters.*

the pipe ; when the solid reaches the bottom of the elbow pipe it falls on the valve, which opens and closes immediately after the fecal matter has passed through ; the liquids follow the sides of the enlarged part of the pipe, and then descend to the interior of the casing. If a small quantity of liquid escapes it is stopped by the valve placed over the second pan which has a narrower 5 opening than the first, and causes it to follow the sides, and thence into the casing, but if a small quantity escapes through the valve it is taken up by the third pan, which is narrower than the second, and diverts it also into the reservoir placed outside ; by this arrangement the solid portion alone falls into the reservoir below. In the case of a strong fall of water an additional 10 valve should be placed above the first cone to break the fall and divert the water. As soon as the reservoir of the portable apparatus is full it can be replaced by another one. To prevent any unpleasant smell, a small quantity of disinfecting powder should be thrown from time to time into the reservoir. When a large quantity of water flows down it should pass over salts or sulphates, 15 which will thus help to clean the drain.

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**SPECIFICATION** in pursuance of the conditions of the Letters Patent, filed by the said Edouard Amourous in the Great Seal Patent Office on the 16th February 1864.

**TO ALL TO WHOM THESE PRESENTS SHALL COME, I, EDOUARD 20 AMOUROUS,** of No. 4, South Street, Finsbury, London, Gentleman, send greeting.

**WHEREAS** Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Twenty-eighth day of August, in the year of our Lord One thousand eight hundred and sixty-three, in the twenty-seventh year of 25 Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said Edouard Amourous, Her special licence that I, the said Edouard Amourous, my executors, administrators, and assigns, or such others as I, the said Edouard Amourous, my executors, administrators, and assigns, should at any time agree with, and no others, from time to time and at all times 30 thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "**IMPROVEMENTS IN APPARATUS FOR SEPARATING SOLID FROM FLUID FECAL MATTERS,**" upon the condition (amongst others) that I, the said Edouard Amourous, my 35 executors or administrators, by an instrument in writing under my, or their,



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or one of their hands and seals, should particularly describe and ascertain the nature of the said Invention, and in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said  
5 Letters Patent.

NOW KNOW YE, that I, the said Edouard Amourous, do hereby declare the nature of my said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement, reference being had to the Drawing hereto annexed, and to the  
10 figures and letters marked thereon, that is to say :—

My Invention consists in the construction of a portable apparatus for separating instantaneously the solid from fluid fecal matters. Until now the division of fecal matters has been effected in reservoirs by means of perforated separators of various forms allowing the liquids to run off through the holes ;  
15 but the liquid being in contact with the solid has liquified the latter, and carried off a portion of the fecal matter into the sewer to the detriment of the solid matters, which would have been converted into manure. I have obviated this defect by my improved apparatus, in which the separation takes place before the entrance of the matters into the reservoir, the liquid part always  
20 running off before the introduction of the solid into the reservoir, and in which this part alone falls, and thus all fermentation is prevented. A small quantity of disinfecting powder thrown from time to time into the reservoir suffices to prevent the disengaging of any insalubrious emanations ; even if large quantities of liquid are thrown in they can be made to pass through  
25 salts or sulphates, and will thus serve to wash out the sewers.

#### DESCRIPTION OF THE DRAWING.

Figure 1 is a sectional elevation, and Figure 2 a modification of the same. A is the reservoir ; B is the cover, on which is fixed the casing H and conical-shaped pans D ; C, valves ; E, conical-shaped pan connected with the delivery  
30 pipe ; F, discharge pipe for the liquid ; G, junction pipe ; H, casing forming a discharge reservoir for the liquids ; I, delivery pipe for solids and liquids ; J, discharge pipe in connection with the street drains.

The operation of the apparatus is easily understood, and is as follows :—  
The fecal matters descending by the delivery pipe I from the watercloset  
35 separate in their descent, the solids falling perpendicularly, and the liquids running down against the sides of the pipe. When they have both reached the end of the elbow pipe G, the solids fall on the valve C, which opens and closes immediately. The liquids flow along the side of the conical pan E,



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and descend into the interior of the chamber H. Were a small portion of liquid to escape it will be stopped by the valve of the pan D, which has a narrower neck than the first, and compelled to follow the sides of the pan, and thence to fall into the chamber or reservoir H; the solids alone enter therefore into the reservoir A, which is made of sheet iron or wood. In the 5 arrangement shewn in Figure 2, the double internal cone is suppressed, and only one valve is employed, which separates the liquids on the sides of the cone and detains a few moments the solid matters on the valve until a sufficient quantity has accumulated to cause it to operate by their own weight. The change of the reservoir when full for an empty one is effected in a moment, 10 and without interrupting the use of the seat of the watercloset. A weight is fixed momentarily to the upper valve to render it steady, which serves to stop the solid, whilst the liquid matters are alone allowed to flow continually through the junction pipe G during the change of reservoirs.

And having now described my said Invention, and the manner of carrying 15 the same into execution, I declare that I do not restrict myself to the details of construction herein-before described, as the same may be varied without deviating from the principle of my Invention; but what I claim as new, and intended to be protected by the herein-before in part recited Letters Patent, is, the construction of an apparatus for separating solid from fluid fecal matters 20 before their entrance into reservoirs, as herein-before described and represented in the annexed Drawing.

In witness whereof, I, the said Edouard Amourous, have hereto set my hand and seal, this Eleventh day of February, in the year of our Lord One thousand eight hundred and sixty-four. 25

E. AMOUROUS. (L.S.)

Witness,

H<sup>y</sup>. GILBEE,

10, Rue de la Fidélité,

Paris.

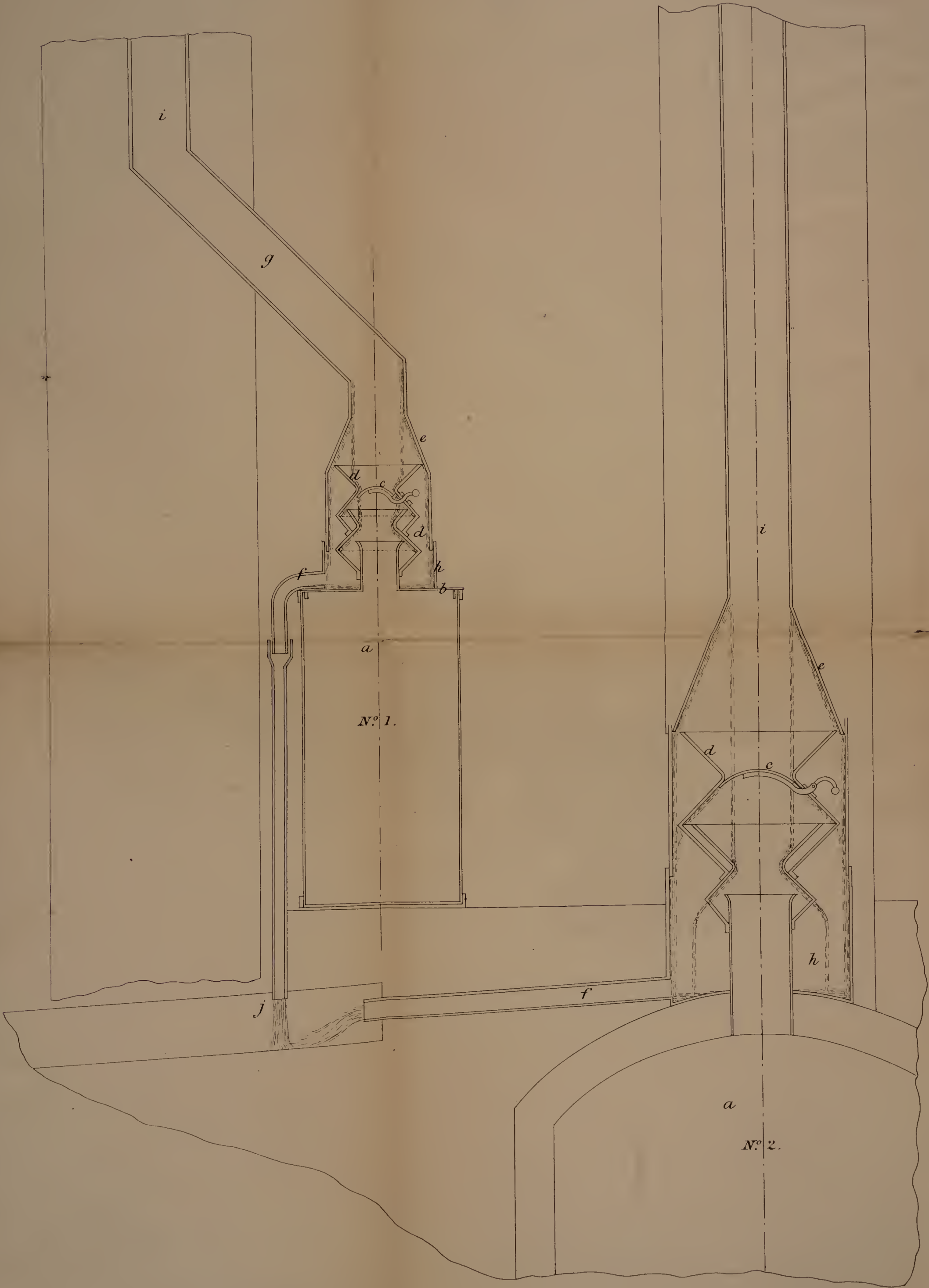
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LONDON:

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The drawing left with Provisional Specification is partly colored.

Drawn on Stone by Malby & Sons.

